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Strategic Issues in Government and Aviation

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Transforming Technology and Program Objectives into Reality



Introduction

- New Administration means a new set of national priorities
- How does aviation fit into the new priorities?
 - Economic recovery
 - DOT's emphasis on sustainability
 - Environment
 - NextGen



Environmental Considerations

- The government has two roles for aviation-regulator and provider
 - FAA sets the environmental goals and limits
 - Noise-reduce the number of people exposed to significant noise (>65 DNL) by 4% per year through 2013
 - Air quality-effect of NO_x, SO_x, etc. input to cost benefit analysis
 - Climate-improve aviation fuel efficiency 1% per year for revenue miles flown through 2013
 - NextGen
 - Reduce exposure 65/60/55 DNL
 - Fuel efficiency based on payload fuel efficiency
 - SESAR
 - Local rules respected
 - Minimize noise to the greatest extent possible
 - Fuel efficiency tied to ATM efficiency
 - <5% of flights have extra fuel burn of >2.5%



Next Chart

- **What should the government do to make these things come about?**
 - **Direct involvement:**
 - Improved ATM system to reduce noise and emissions
 - Scientific study to understand effects of fuel burn in the atmosphere
 - **Indirect involvement**
 - Technology development consistent with National Aeronautics R&D Policy
 - Example is Energy Efficiency Program of the early eighties
 - Provided technology for many efficiencies in use today
 - NASA program consisted of two elements R&T Base and Systems technology
- **Strategic issue is amount of involvement of NASA in providing this technology and TRL Level at handoff**



NextGen

- **NextGen came about because of gridlock and a lack of past successes**
 - Without a successful NextGen situation will get worse
 - Government will be failing in one of its fundamental roles
 - Aviation is clearly a cornerstone of commerce

- **To make NextGen a success will take a lot of will**
 - NextGen is so challenging it would be extremely difficult even if everything was in place
 - Funds in the \$30B+ range will be needed but will be hard to come by in these times
 - Better management structure is needed
 - Right now we have a partnership of agencies with varying need of the outcome
 - Probably the most difficult structure to result in success



Timeline Summary

Program	Technology development	Policy development	Deployment	Total*
TCAS	8 years	9 years	12 years	20 years
RNP	9 years	9 years	Incremental	9 years
RVSM	8 years	13 years	15 years	23 years
CTAS (TMA)	7 years	N/A	12 years	19 years

* Activity times are not additive because of concurrency

Timelines are affected by:

- Degree of technical advance
- Funding and programmatic issues
- Suitability for selective or incremental deployment
- Policy issues
- Cultural or workload change required
- Stakeholder support/acceptance
- Stakeholder diversity and level of involvement/commitment required
- Level of Agency, Congressional, or Administration commitment



NextGen II

There is liquid in the glass

Pop quiz:

is it half full?

is it half empty?



NextGen III

Answer: **It is half full (but there is a leak)**

- **High visibility both within the Administration and the Congress**
- **JPDO's work is essentially complete**
- **Broad agreement that implementation has to begin**
- **Administration change**
 - **FAA Administrator has two major issues, NextGen and the unions**
- **Executive Order 13749**
 - **Raises visibility**
 - **SPC staffing up**

And if that doesn't work...